WHAT IS CLAIMED IS:

1. An apparatus for discriminating a kind of a sheet material, comprising:

a substrate having a recessed portion;

a press member situated so that a sheet material can be deflected using the recessed portion;

a support member for supporting the press member such that the sheet material situated to cover the recessed portion is pressed by the press member; and

a sensor for detecting information corresponding to a deformation amount of the sheet material,

means for discriminating a kind of the sheet material on basis of the information on the deformation amount of the sheet material detected by the sensor.

2. The apparatus according to claim 1, wherein the support member and the press member are coupled together and situated outside the recessed portion, and the support member is deformed when the press member presses the sheet material.

3. The apparatus according to claim 1, wherein the press member is situated outside the recessed portion, and the support member is situated inside

the recessed portion, and the support member is deformed on basis of pressing the support member via the sheet material by the press member.

4. The apparatus according to claim 1, further comprising press member holding means for holding the press member, wherein the press member holding means holds the press member at a distance from the substrate when the sheet material is set in the substrate, and moves the press member to a position near the recessed portion when the sheet material is pressed.

5. The apparatus according to claim 4, wherein the press member holding means holds the press member so that the press member contacts the sheet material at a position other than the recessed portion.

6. The apparatus according to claim 1, further comprising:

a first memory for storing as data a relationship between output signals of the sensor and the kind of the sheet material; and

a first discrimination unit for discriminating the kind of the sheet material from the output signals of the sensor and data in the first memory.

7. The apparatus according to claim 5, wherein

the press member holding means moves the press member along the sheet material,

the sheet material is not deflected when the press member is located in a position other than the recessed portion, and

the sheet material is deflected when the press member is located near the recessed portion.

8. The apparatus according to claim 7, wherein the sensor detects a deformation amount of the support member when the sheet material is not deflected and a deformation amount of the support member when the sheet material is deflected, and the kind of the sheet material is discriminated based on a difference therebetween.

9. The apparatus according to claim 8, further comprising:

a second memory for storing a deformation amount of the support member when the sheet material is not deflected; and

deformation amount difference calculating means for calculating a difference between a deformation amount of the support member when the sheet material is deflected and the deformation amount stored in the second memory.

10. The apparatus according to claim 9, further comprising:

a third memory for storing as data a relationship between the difference in deformation amount and the kind of the sheet material; and

a second discrimination unit for discriminating the kind of the sheet material from results by the deformation amount difference calculating means and data in the third memory.

11. The apparatus according to claim 7, wherein the sensor detects a change in deformation amount of the support member in a process of change in deflection amount of the sheet material, and the kind of the sheet material is discriminated based on the change in deflection amount.

12. The apparatus according to claim 11, further comprising:

a fourth memory for storing as data a relationship between the change in deformation amount of the support member and the kind of the sheet material; and

a third discrimination unit for discriminating the kind of the sheet material from the detected change in deformation amount of the support member and data in the fourth memory.

13. The apparatus according to claim 7, wherein the press member is a rotatably supported roller.

14. The apparatus according to claim 7, further comprising press force imparting means for imparting a press force to the press member.

15. The apparatus according to claim 14, wherein the press force imparting means tilts the press member holding means to apply a bending moment to the press member.

16. The apparatus according to claim 14, wherein the press force imparting means applies a load to the press member.

17. The apparatus according to claim 4, wherein the press member holding means rotatably supports the press member so that the press member comes close to or moves away from the recessed portion,

the sheet material is deflected when the press member is close to the recessed portion, and

the sheet material is not deflected when the press member is at a distance from the recessed portion.

18. The apparatus according to claim 17,

further comprising press force imparting means for imparting a press force to the press member.

19. The apparatus according to claim 18, wherein the press force imparting means is a spring member installed between the press member and the press member holding means.

20. The apparatus according to claim 1, wherein the sensor is a piezoelectric member.

21. The apparatus according to claim 1, wherein the support member is an elastic member.

22. A method for discriminating a kind of a sheet material, comprising the steps of:

pressing the sheet material on a recessed portion;

detecting a deformation amount of the sheet material; and

discriminating a kind of the sheet material on basis of the detected deformation amount.